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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER
LUCAS, ZACHARIAH

ART UNIT	PAPER NUMBER
1648	12

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/934,249	LEE ET AL.	
	Examiner	Art Unit	
	Zachariah Lucas	1648	

-- The MAILING DATE of this communication appears on the cover sh et with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *12 February 2003* .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-4,8-11,68 and 79-87* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-4,8-11,68 and 79-87* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *21 August 2000* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) *7,10* .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Status of the Claims

1. Currently claims 1-4, 8-11, 68, and 79-87 are pending and under consideration in the application. A restriction requirement was mailed regarding claims 1-78 of the application. In the election (COM February 6, 2003), the Applicant noted an inconsistency between their records and those of the Office regarding the claims pending in the application. The Applicant's re-submission of the preliminary amendment, which had not been previously matched with the file, is appreciated.

Election/Restrictions

2. Applicant's election without traverse of Group I in Paper No. 9 (the Election, COM February 6, 2003) is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).

3. The Applicant's statement regarding the election of a one of Groups (F)-(I) is noted, and agreed with, by the Examiner.

4. As the amendment that was originally filed with the application was not entered in to the application until March 6, 2003, at which point claims 12, 15, and 17 had already been cancelled from the application by the Election, the amendments to these claims were not entered into the case.

Drawings

5. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference sign(s) not mentioned in the description: The specification does not identify what is being identified by any of the reference numbers provided in Figure1. A proposed drawing correction, corrected drawings, or amendment to the specification to add the reference sign(s) in the description, are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Objections

6. Claim 1 is objected to because of the following informalities: this claim reads, in part, on "nucleic acid molecules which hybridize under stringent conditions to a molecule consisting of a nucleotide sequence as set forth as SEQ ID NO: 1 and which code for a MIVR-1 polypeptide..." It is suggested the claim be amended to read on a nucleic acid that hybridizes to the -- nucleotide sequence of SEQ ID NO: 1--, and that the word "code" be substituted with the term --codes for-- or --encodes--. Appropriate correction is required.

7. Claim 1 is objected to because of the following informalities: this claim contains a subsection (b) that reads on "nucleic acid molecules that differ from the nucleic acid molecules of (a) or (b) in codon sequence due to degeneracy of the genetic code." It is suggested that the

subpart be amended such that it does not refer to itself-thereby rendering the claim circular and indefinite. Appropriate correction is required.

8. Claim 4 is objected to because of the following informalities: in subpart (3) of the claim, line 9, the claim reads on "fragments of (1) and (2)." As (1) and (2) are distinct, and non-overlapping sequences, there is not fragment that is a fragment of (1) and (2), but there may be fragments of (1) or (2). Appropriate correction is therefore required.

Claim Rejections - 35 USC § 112

9. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

10. Claims 1, 8, and 10 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 1 will be treated as representative of the rejected claims. This claim describes a nucleic acids "which hybridize under stringent conditions to a molecule consisting of a nucleotide sequence as set forth as SEQ ID NO: 1 and which code for a MIVR-1 polypeptide..." The claim also has a subpart (b) that reads on "nucleic acid molecules that differ from the nucleic acid molecules of (a) or (b) in codon sequence due to degeneracy of the genetic code." The claim is indefinite for two reasons.

The first reason that this claim is rejected as indefinite for the inclusion of the language "under stringent conditions." It is unclear what the boundaries of this claim are. It is known in

the art that the level of stringency in a hybridization experiment will affect the level of homology between the hybridizing sequences. Thus, in order for one skilled in the art to determine the boundaries of a claim to a hybridization partner, such a person must be apprised of the stringency condition to which the claimed invention refers. In the present case, the applicant has provided a few examples of stringency conditions that may be used, but has not described the specific range of conditions to which the clamed invention refers. Pages 13-14. As the applicant has not identified a single set of stringency conditions, or a range thereof, by which one skilled in the art could determine the scope of the claimed invention, the claims identified above are indefinite.

The claim is also rejected as indefinite because subpart (b) of the claim reads on sequences that differ from the sequences of subpart (b) due to degeneracy of the genetic code. As subpart (b) does not identify any sequences in addition to (a) which may vary from the sequences of (a) due to degeneracy, it is unclear what the self-reference to the nucleic acids of (b) reads on.

11. Claims 4, 9, 11, 79, 80, 81, 84, 85, 86, and 87 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 4 will be treated as representative of the rejected claims. This claim reads on an isolated nucleic acid molecule consisting of a unique fragment of the sequence of SEQ ID NO: 1, or complements thereto, wherein the fragments includes contiguous nucleotide sequences not identical to any members of a sequence group provided in the claim. From claim 4, depends claim 79. This claim reads on the isolated nucleic acids of claim 4 wherein the sequences are selected from a group consisting of various numbers

of contiguous nucleotides non-identical to the sequence group (e.g. at least 2 nucleotides not identical to the sequence group, at least 3 nucleotides not identical to the sequence group, etc.).

The specification has defined a "unique sequence" as a "signature" for a larger sequence. Page 15, lines 31-32. The applicant describes such sequences as "long enough to assure that its precise sequence is not found in molecules within the human genome outside of MIVR-1 nucleic acids." Pages 15-16. The specification also excludes sequences "completely composed" of the sequences from the sequence group "and/or other previously published sequences as of the filing date of this application." Page 16, lines 3-6. The applicant has not identified any specific sequences as unique fragments.

The basis for rejection of these claims as indefinite is the definition provided for the unique sequences provided in the specification. The applicant has defined these sequences as excluding "other previously published sequences as of the filing date of this application." However, the applicant has nowhere identified such sequences. As one skilled in the art would not know from the application what sequences the applicant considers a "previously published," and as no guidance has been provided as to where one may find all of these previously published sequences, one of ordinary skill in the art would not be able to determine the metes and bounds of the present claims.

12. Claim 68 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. This claim reads on compositions comprising isolated MIVR-1 nucleic acids. The scope of this claim is unclear. The specification appears to treat variants and fragments of the

MIVR-1 gene (SEQ ID NO: 1) as MIVR-1 nucleic acids. See, page 13, lines 22-30. However, the application also appears to treat homologues and alleles of MIVR-1 nucleic acids as distinct. As homologues and alleles would generally be expected to share many of the same traits as variants of MIVR-1 nucleic acids, the distinction between these them is unclear. In view of this, it is also unclear as to what constitutes an MIVR-1 nucleic acid.

13. The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

14. Claims 1, 2, 3, 8, 10, 82, and 83 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. These claims read, in part, on "nucleotide molecules which hybridize under stringent conditions to a molecule consisting of a nucleotide sequence set forth as SEQ ID NO: 1 and which code for a MIVR-1 polypeptide having cardiac cell anti-apoptotic activity." SEQ ID NO: 1 is described in the specification as encoding a polypeptide with cardiac cell anti-apoptotic activity. Page 3, lines 21-25. As SEQ ID NO: 1 is disclosed as encoding such a polypeptide, it is apparent that nucleic acids that hybridize to this sequence will not themselves encode for such polypeptides. It is suggested that the applicant amend the claim to read on nucleic acids that hybridize to the complement of SEQ ID NO: 1.

15. Claims 3 and 83 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. For the purposes of this rejection, it is being assumed that the applicant has enabled the use of the full-length protein encoded by SEQ ID NOs: 1 and 3. The rejected claims read on a nucleic acid encoding a MIVR-1 polypeptide having cardiac cell anti-apoptotic activity. The claim therefore reads on a genus of polynucleotides that encode a polypeptide with anti-apoptotic activity.

In order to satisfy the 112 ¶1 written description requirement for a genus of DNA molecules, the applicant must provide more than a statement of the biological function of the DNA. See e.g. Amgen Inc. v. Chugai Pharmaceutical Co. Ltd., 18 U.S.P.Q.2d 1016, 1027 (CAFC 1991); and Fiers v. Revel, 25 U.S.P.Q.2d 1601, 1604-05 (CAFC 1993). In Amgen v. Chugai, the Court of Appeals for the Federal Circuit stated that "[i]t is not sufficient to define [a DNA] solely by its principal biological property, e.g. encoding of human erythropoietin." Id., at 1021. Rather, "what is necessary is that [the applicant] provide a disclosure sufficient to enable one skilled in the art to carry out the invention commensurate with the scope of his claims." Id., at 1027. In these statements, the court has expressly stated that a DNA molecule must be described by means of description other than by naming the encoded protein to satisfy the 112 ¶1 written description requirement.

In a later case, the court stated what forms of description the applicant could provide to provide their claims with written description support. See, Fiers v. Revel, 25 U.S.P.Q.2d at 1604-05. According to the CAFC, two methods of describing and claiming DNA are through the

DNA's structural makeup (its sequence), or by a process of making it. Id. More recently, the Federal Circuit again took this position. In the case University of California v. Eli Lilly and Co., 43 U.S.P.Q.2d 1398, at 1406 (1997), the court stated that defining a cDNA by its function "is only a definition of a useful result rather than a definition of what achieves that result." The court also stated that such a description "does not define any structural features commonly possessed by members of the genus [of claimed cDNAs] that distinguish them from others." Id. Thus, in order to support claims 3 and 83 of the present application, the applicant must identify some characteristic, other than function, of the nucleic acids that fall within the claim.

While the applicant has disclosed SEQ ID NO: 3, the coding sequence of the nucleic acid encoding the full length protein with the claimed function, the applicant has not disclosed what portions of the protein, therefore what portions of the coding sequence, are necessary, or even likely to be involved with, the claimed function. In the absence of such teachings, the application has not provided sufficient written description support to demonstrate that the Applicant was in possession of any polypeptide, other than the full length protein, that have the claimed function.

16. Claims 1-3, 8, 10, 11, 82, and 83 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. These claims read on nucleic acids coding "for a MIVR-1 polypeptide having cardiac cell anti-apoptotic activity." These claims are rejected for lack of enablement because the applicant, although they have asserted that the protein encoded by SEQ ID NO: 1, and having the sequence of SEQ ID NO: 2, has provided no evidence demonstrating that the

protein does in fact have the asserted function. The protein is closely related to several proteins in the art. See e.g. WO 00/52022 (Barnes et al), Figure 5, pages 15, and 36-38, WO 00/34477 (Tang et al.), SEQ ID NOs: 17 (protein) and 44 (nucleotide), Pages 7-8; and Xu et al., Genomics 66:257-263 (2000), page 259 (Figure 1), and 261 (page numbers provided relate to the sequence description, and to functions asserted by the references). However, while each of these proteins may be found in several organs throughout the human body, the art has as yet been unable to ascertain the function of the proteins. See e.g. Xu, page 261 (stating that the functions of the members of the protein class discussed therein "remain to be elucidated"). Further, the references that do assert functions, assert ones that do not match the assertion made by the present applicant. See e.g. Tang, pages 7-8, stating that the proteins of SEQ ID NOs: 1-27 (of which SEQ ID NO: 17 shares identity with residues 38-287 of the protein encoded by SEQ ID NO: 1 of the present application) are neurotransmitters. Thus, the activity of the proteins is in doubt, and not well enough known in the art that one skilled in the art would be able to use the claimed nucleic acids encoding for these proteins without further guidance, or evidence of their function.

In view of the fact that the applicant is not enabled for the full protein, the applicant is also not enabled for the fragments thereof encoded by the fragments of SEQ ID NO: 3 described in claim 3. Even had the applicant established the utility of the full length protein encoded by the claimed nucleic acids such that one skilled in the art would be able to use the encoded protein, the applicant has not provided sufficient guidance such that one skilled in the would be able to make and use fragments of the protein as the applicant has not identified the portion, or portions, of the protein necessary to the performance of this function. Absent such guidance, one of

ordinary skill in the art would not be able to make or use the claimed fragments of SEQ ID NO: 3.

17. Claims 4, 9, 11, 79, 80, 81, 84, 85, 86, and 87 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. These claim read on "unique fragments" of an MIVR-1 nucleic acid sequence. The specification has defined a unique fragment as a "signature" for a larger sequence. Page 15, lines 31-32. The applicant describes such sequences as "long enough to assure that its precise sequence is not found in molecules within the human genome outside of MIVR-1 nucleic acids." Pages 15-16. Thus, the applicant is claiming a genus of nucleic acid sequences (i.e. the signature sequences of the MIVR-1 sequence of SEQ ID NO: 1 according to the function that they perform. These claims are rejected for two reasons.

The first reason that these claims are rejected as lacking written description support is that the applicant has not provided adequate description such that one of ordinary skill in the art would recognize that the applicant was in possession of the claimed genus. In order to satisfy the 112 ¶1 written description requirement for a genus of DNA molecules, the applicant must provide more than a statement of the biological function of the DNA. See e.g. Amgen Inc. v. Chugai Pharmaceutical Co. Ltd., 18 U.S.P.Q.2d 1016, 1027 (CAFC 1991); and Fiers v. Revel, 25 U.S.P.Q.2d 1601, 1604-05 (CAFC 1993). In Amgen v. Chugai, the Court of Appeals for the Federal Circuit stated that "[i]t is not sufficient to define [a DNA] solely by its principal

biological property, e.g. encoding of human erythropoietin." Id., at 1021. Rather, "what is necessary is that [the applicant] provide a disclosure sufficient to enable one skilled in the art to carry out the invention commensurate with the scope of his claims." Id., at 1027. In these statements, the court has expressly stated that a DNA molecule must be described by means of description other than by naming the encoded protein to satisfy the 112 ¶1 written description requirement.

In a later case, the court stated what forms of description the applicant could provide to provide their claims with written description support. See, Fiers v. Revel, 25 U.S.P.Q.2d at 1604-05. According to the CAFC, two methods of describing and claiming DNA are through the DNA's structural makeup (its sequence), or by a process of making it. Id. More recently, the Federal Circuit again took this position. In the case University of California v. Eli Lilly and Co., 43 U.S.P.Q.2d 1398, at 1406 (1997), the court stated that defining a cDNA by its function "is only a definition of a useful result rather than a definition of what achieves that result." The court also stated that such a description "does not define any structural features commonly possessed by members of the genus [of claimed cDNAs] that distinguish them from others." Id. Thus, in order to support claims 4, 9, 11, 79, 80, 81, 84, 85, 86, and 87 of the present application, the applicant must identify some characteristic, other than function, of the nucleic acids that fall within the claim.

As indicated above, the applicant only generally describes what comprises a "unique fragment" of the MIVR-1 nucleic acids. In this discussion, the applicant provides only the description outlined above, and states that "those of ordinary skill in the art may apply no more than routine procedures to determine if a fragment is unique..." Page 16, lines 1-2. Thus, the

applicant has identified a function of the nucleic acids, and has provided an invitation to those in the art to perform their own assays for nucleic acids that perform this function. No additional guidance towards, or examples of, the claimed sequences have been provided. It is noted that the applicant identifies, by inference, a number of signature sequences that have been explicitly excluded from the claims. I.e. SEQ ID NOs: 14-17. However, the disclosure of these sequences does not satisfy the written description requirement for the claimed sequences for two reasons. First, no shared common structure of the sequences has been identified such that one of ordinary skill in the art would be able to readily recognize additional signature sequences. Second, even if such a common structure had been identified, these sequences have been excluded from the claimed invention, and therefore are of minimal, if any, value in the identification of the claimed sequences.

The second reason that the applicant lacks written description support for the claimed "unique sequences" is that the nucleic acid of the disclosed sequence shares significant homology with other human DNA sequences (cf. SEQ ID NO: 3 with the sequence disclosed by Xu et al., Genomics 66:257-63-Accession number AF224278). The unique sequences of claim 4 are supposed to be able to distinguish between MIVR-1 nucleic acids and other human genes (page 15-16). However, it is apparent from Xu that the disclosed sequence shares significant homology with at least one other nucleic acid. The nucleic acid disclosed by Xu is identical to the disclosed coding sequence for residues 37-287 of the encoded protein, and 3' non-coding sequence. The Xu sequence does not, however, encode the first 37 amino residues present in the peptide encoded by SEQ ID NO: 1, or disclose the 5' end non-coding sequences of SEQ ID NO: 1. In view of this, the only possible region of SEQ ID NO: 1 from which the "unique fragments"

could be derived are those of the 5' end non-coding sequence, and the coding sequence for the first 37 peptides. As the applicant has not disclosed that this is the case, the applicant has not provided adequate written description for the claimed "unique fragments."

Claim Rejections - 35 USC § 102

18. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

19. Claim 1 is rejected under 35 U.S.C. 102(a) as being anticipated by either Tang et al. WO 00/34477, or by Xu et al., Genomics 66:257-63 (June 2000, Accession number AF224278). This claim reads on nucleic acid molecules that would hybridize to SEQ ID NO: 1 and which code for a MIVR-1 polypeptide having cardiac cell anti-apoptotic effect. For the purposes of this rejection, it is assumed that the applicant is enabled for the claimed function. Each of the two references discloses a peptide which, except for the first two amino residues, is identical to the sequence of residues 38-287 of the peptide encoded by SEQ ID NO: 1. Further, in each case, a portion of the non-coding 3' sequence also disclosed as part of the nucleic acids matches the 3' sequence disclosed in SEQ ID NO: 1 of the present application. Thus, given the significant homology of the proteins (indicating that the proteins are likely to perform the same functions), and the fact that the nucleic acids are likely to hybridize under stringent conditions to the complement of SEQ ID NO: 1, these references anticipate the identified claim.

Examiner's Note

20. It is noted that the Xu and Tang references disclose nucleic acids that include large portions of non-coding sequences which, may prevent the sequences, under high stringency conditions, from hybridizing to SEQ ID NO: 1. However, as the references also disclose the proteins encoded by the sequences, and therefore the coding portions of the sequences, it would have been obvious to one of ordinary skill in the art to have isolated those portions of the disclosed nucleic acids. Thus, if the Applicant were to amend the claims to recite conditions that would be considered highly stringent, claim would be rejected as obvious over the disclosures of each of Tang and Xu.

Conclusion

21. No claims are allowed.

22. The following prior art reference is made of record and is considered pertinent to applicant's disclosure. However, while relevant they are also not used as a basis for rejection for the stated reasons.

> Tang et al.., WO 00/34477. The teachings of this reference were described in part above. The reference teaches a fragment of a polynucleotide sequence encoding a polypeptide with substantial homology to SEQ ID NO: 2. The reference also teaches a polynucleotide fragment, identified as residues 218-262 of SEQ ID NO: 44 of the reference. This fragment is identical to residues 633-679of SEQ ID NO: 1. However, as the reference also teaches that this fragment is also part of the disclosed SEQ ID NO: 44, it can be used as a probe for either of SEQ ID NO: 44 of the reference, or of SEQ ID NO: 1 or 3 of the current application. Thus, the fragment would not be considered a unique fragment as described by the application and claim 4.

23. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Zachariah Lucas whose telephone number is 703-308-4240. The examiner can normally be reached on Monday-Friday, 8 am to 4:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James Housel can be reached on 703-308-4027. The fax phone numbers for the organization where this application or proceeding is assigned are 703-308-4242 for regular communications and 703-872-9307 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0196.

Z. Lucas
Patent Examiner
April 21, 2003

JAMES HOUSEL 5/5/03
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1600